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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,454	11/14/2003	Youssef S. Wakil	17116.003003	9376

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OSHA LIANG L.L.P.  
1221 MCKINNEY STREET  
SUITE 2800  
HOUSTON, TX 77010

EXAMINER
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SANDERS JR, JOHN R

ART UNIT	PAPER NUMBER
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3735

DATE MAILED: 09/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/714,454

Applicant(s)

WAKIL ET AL.

Examiner

John R. Sanders

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 10/137,724.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 3/14/05, 11/29/05
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because FIGS. 13-18D are informal. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2, 12-13, 15-16, 19, 26-27, 37-38, 42-43 and 46 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,409,345 to Molebny et al ("Molebny").

4. Molebny expressly discloses means for synchronously measuring the total aberration characteristics of the eye and the aberration characteristics due to the cornea of the eye. Ray tracing is used with polarized light to obtain said measurements from beam reflections off of the retina and cornea of the eye. A comparator is used to synchronously compare the total refraction with the refraction due to the cornea and by subtraction can obtain a difference measurement representing the aberration component due to parts of the eye other than the cornea. These

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measurements are stored in memory and can be displayed on a computer system [col. 8, line 20 - col. 9, line 51].

5. Molebny expressly discloses varying the state of accommodation of the eye from near point to far point fixation, as well as adjustment for any point in between, and discloses taking aberration refraction measurements of the eye at said varying points [col. 11, lines 36-61] or for taking sequential measurements during the movement of the fixation point [col. 15, line 65- col. 16, line 7].

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-11, 14, 17, 18, 20-25, 28-36, 39-41, 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Molebny in view of U.S. Publication No. 2003/0199858 to Schelonka ("Schelonka"), U.S. Patent No. 5,258,791 to Penney et al ("Penney") and U.S. Publication No. 2003/0142271 to Ross ("Ross").

8. Molebny does not expressly disclose measuring aberration characteristics at varying lighting conditions. Schelonka teaches determining the visual acuity of the eye for varying pupil diameters caused by varying lighting conditions and further teaches optimizing a correction based on the measurements obtained, both at near point and far point fixation. One of ordinary skill in the art would have found it obvious to modify Molebny to optimize a correction based on pupil size and accommodation effects, as in Schelonka.

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9. Though Molebny does not expressly disclose limitations regarding parallel/non-parallel ray tracing for near/far point aberration measurement, Penney teaches a spatially resolved objective refractometer that produces parallel and non-parallel rays (FIGS. 9, 10, 11) and as such one of ordinary skill in the art would find it obvious to do so in the method and device of Molebny, in order to have the rays appear to propagate from a near or far distance target.
10. Regarding limitations to the application of Zernike (or other) polynomial representations of refractive measurements, though not expressly disclosed by Molebny, one of ordinary skill in the art would be apprised of said polynomials general application for curve-fitting surfaces to aberration measurement data (especially with regard to ray tracing and Hartmann-Shack wavefront sensing) and as such would have found it obvious to apply said polynomials to the data acquired by the method and device of Molebny.
11. Regarding limitations to the use of a Hartmann-Shack wavefront sensor, an aberroscope, or sciascopy, though not expressly disclosed by Molebny, these different means are art-recognized species for determination of the refractive characteristics of the eye and as such one of ordinary skill in the art, being apprised of their nature, would find it obvious to use any one of said means to measure the refractive characteristics of the eye within the method and device of Molebny. Similarly, checkered Placido ring projection, such as in ROSS et al., is a known species of corneal topographic measurement that one of ordinary skill in the art would find obvious to substitute for the ray tracing measurement of Molebny.
12. Finally, though not expressly disclosed by Molebny, one of ordinary skill in the art would find it obvious to recommend corneal surgery when the corneal aberration component is large and, conversely, recommend an IOL correction when the corneal aberration component is

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minimal, since one of ordinary skill in the art would be knowledgeable that an optimal correction should be applied to the component of the eye providing the most aberration.


### *Conclusion*

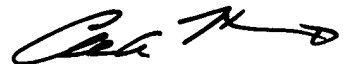
Any inquiry concerning this communication or earlier communications from the examiner should be directed to John R. Sanders whose telephone number is (571) 272-4742.

The examiner can normally be reached on M-F 10:00 am to 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor II can be reached on (571) 272-4730. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
JRS  
21 September 2006

  
Charles A. Marmor, II  
SPE, Art Unit 3735